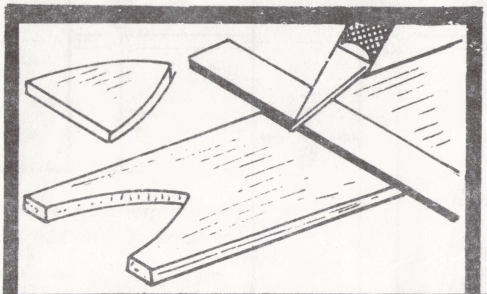
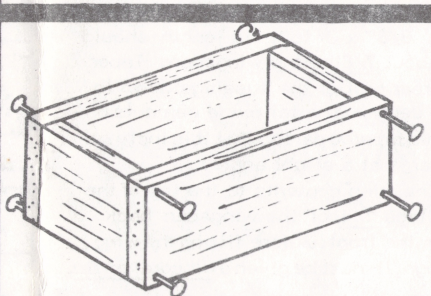
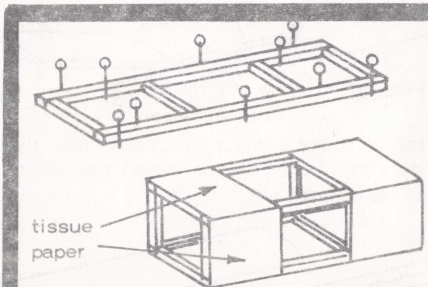
THINGS TO MAKE WITH SOLARBO BALSA



Balsa is very easy to cut, shape and carve. Use a sharp modelling knife (or Craft knife) for cutting thinner sheet and strip. Use a steel rule as a guide when making straight cuts. Curved cuts are made freehand. For cutting thick sheet and block, use a small stiffback saw for straight cuts and a fretsaw for curved cuts. Smooth any rough edges with fine glasspaper.

Use Balsa cement for making glued joints. This is quick-drying and you can hold parts together until set with pins. Box shapes, small cabinets and other items are easily made from sheet Balsa glued and pinned together in this way. Remove pins when the joints have set properly and complete by sanding all edges smooth, if necessary. To colour, use emulsion paint as this will fill the grain of the wood easily in one or two coats.

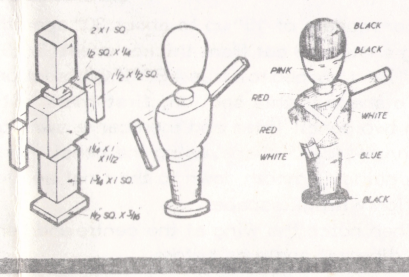




Frames are made from strip Balsa. Pin out the main frame members over a flat surface, then cut and cement the cross pieces in place. To build two identical frames, assemble the second one on top of the first.

Two frames joined with further cross pieces make a BOX KITE frame. To complete, cover the end bays with tissue or thin paper, attached with Balsa cement.

Use a really sharp knife for carving Balsa. The easiest way to produce carved figures is first to build up the figure shape from separate pieces of strip, block or sheet, cemented together. Leave for an hour at least to set before starting carving. Only take small cuts at a time and work slowly and carefully. The figure can then be finished to final shape with glasspaper. To colour, use emulsion paint or poster colours.



MODEL AIRCRAFT

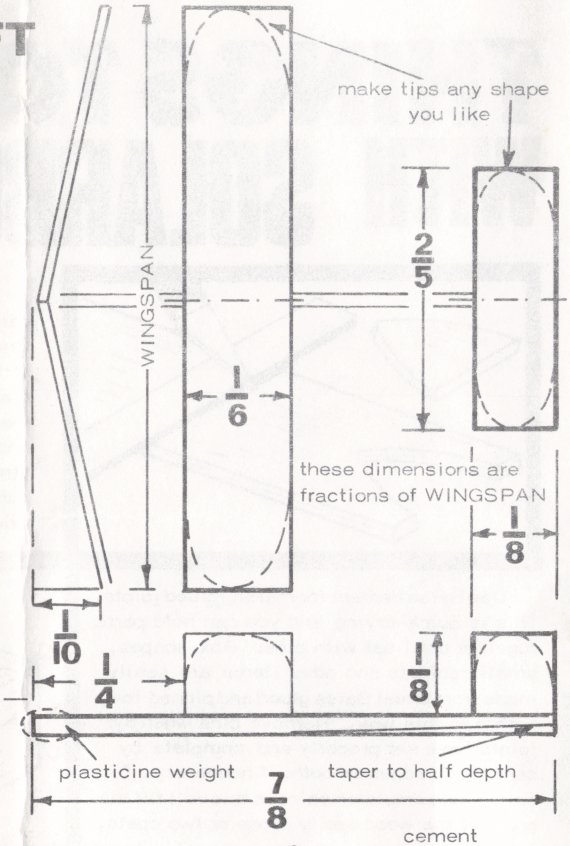
This drawing shows the proportions to use for designing your own model glider. First decide the WINGSPAN you want (which should not be smaller than 6" and not bigger than about 15").

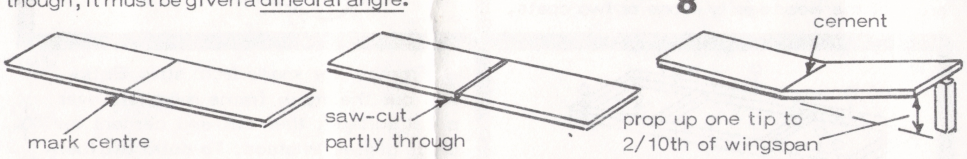
The WING should be cut from 3/32" sheet in the shape of a rectangle 1/6 the wingspan. For example, if you decide on 12" span, the width of the wing will be 1/6th of 12 = 2".

TAILPLANE and FIN are cut from 1/16" sheet. The Tailplane span is 2/5ths the wingspan; and its width 1/8th the wingspan. The Fin is a square, with the same dimension as the width of the tailplane. These dimensions do not have to be exact. Work to a convenient near measurement.

The FUSELAGE is a length of Balsa strip, twice as deep as it is wide - e.g. 3/8" x 3/16". Its length should be about 7/8ths the wingspan. Taper the rear half of the fuselage down to half depth. The tailplane cements onto this tapered part so that it is inclined upwards at a slight angle.

The wing cements to the top of the fuselage 1/4 of the wingspan back from the front. Before fitting the wing, though, it must be given a dihedral angle.





These three small diagrams show how to give the wing a dihedral angle. After making the saw cut, crack-bend the wing.

Prop up to the correct dihedral angle, give a generous coat of cement over the centre and leave until set.

For models of 15" up to about 30" span the wing should be cut from thicker sheet (3/16" or 1/4") and shaped to a true AEROFOIL section.

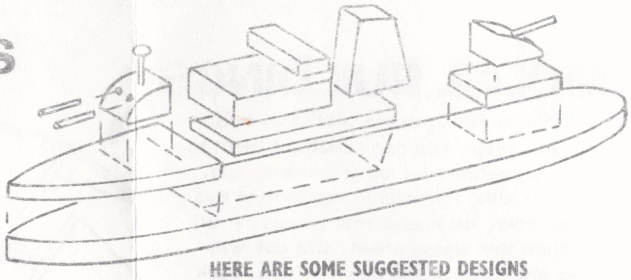
To shape to this section, first mark out with two pencil lines and then carve away to a 'three-sided' shape, using the pencil lines as a guide. Smooth down to the final aerofoil section with glasspaper.

Then notch the wing at the centre and bend to a dihedral angle as before.

Larger Models...

Larger models - and those designed for powering by rubber motors or model engines - are best built from KITS. These kits contain pre-cut parts which simplify assembly and make it much easier to produce an accurate model.

MODEL SHIPS

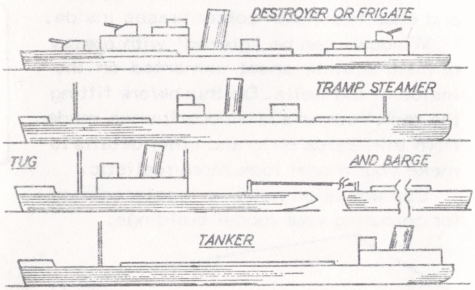


Waterline model ships are made in 'layer' fashion. Cut the hull to a suitable plan shape from sheet. Other parts are then cut from thinner sheet, strip or block and cemented in place to complete the superstructure.

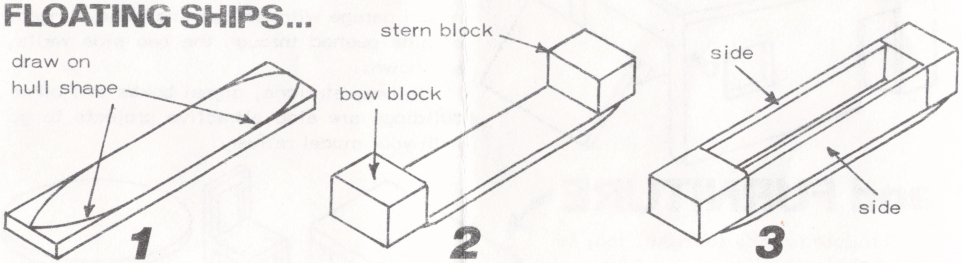
Movable parts, like gun turrets, can be mounted with a pin. Make masts and guns from toothpicks. If parts are to have different colours, paint each part before cementing or fitting in place.

There are all sorts of different scale model ships you can make in this way. Why not build a collection all to the same scale? Study photos and drawings of ships in magazines, etc to plan each model in 'layers'.

HERE ARE SOME SUGGESTED DESIGNS



FLOATING SHIPS...

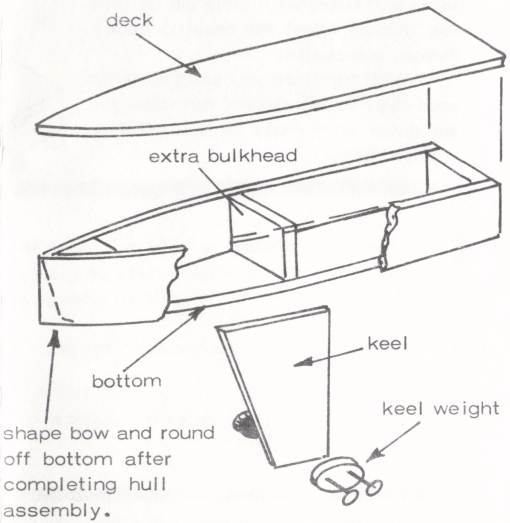


FLOATING MODEL SHIPS need to have hollow hulls. A simple method of making hulls of this type is shown above. Mark out and cut the hull shape from thick Balsa sheet (1). Cut two blocks the same width as the hull and cement to bow and stern, as shown (2). Cut two side pieces from $\frac{1}{4}$" sheet and cement in place (3).

When set, carve the bow and stern blocks to shape and round off the hull bottom. The deck can be cut from 1/16" sheet and superstructure added like the waterline scale models - but keep as light as possible. Weight will have to be fitted to the bottom of the hull for the model to float level.

Model yacht hulls can be made in a similar manner. They also need a keel weight fitted to a keel piece.

Sails for small yachts can be made from stiff paper, or cut from thin balsa sheet cemented to the mast at an angle.

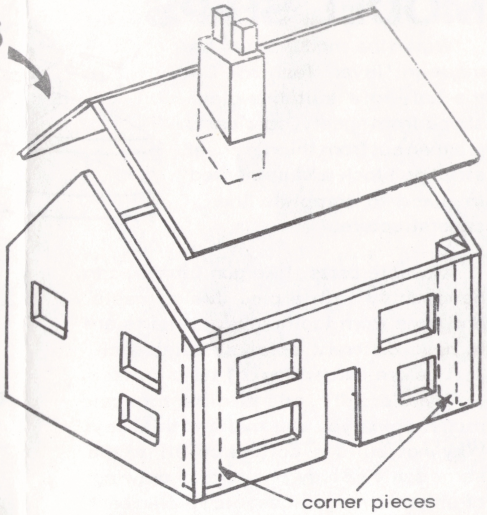


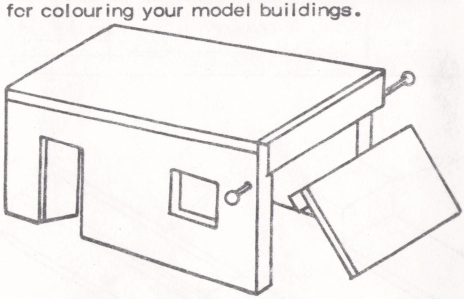
MODEL BUILDINGS

Model houses, shops and other buildings are easy. You can construct them to scale to match your other models, too. Each building is made in the form of two ends, front, back and roof pieces - all cut from thin Balsa sheet. Cut out windows and doors. Assemble the front, back and ends first, with corner braces inside.

Windows can be 'glazed' with pieces of clear acetate sheet cemented on the inside of the walls. Do this before fitting the roof. You can add window frames made from thin Balsa strip and other details to make your model look more realistic.

Use emulsion paints or poster colours for colouring your model buildings.





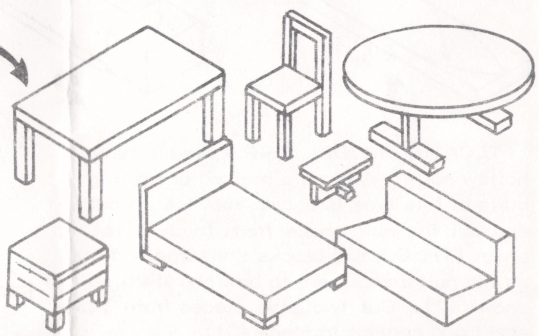
Garages and other buildings with flat roofs are even easier to make. You can also fit a model garage with an opening door, hinged on pins pushed through the two side walls, as shown.

Railway stations, signal boxes and other buildings are also attractive projects to go with your model railway.

and FURNITURE

Furniture is easy to make, too, to go inside your model house. Tabletops and chair seats, etc are cut from sheet Balsa and fitted with strip Balsa legs. Use thicker sheet for making beds, divans, armchairs.

'Wood' furniture you can stain with wood dye. 'Upholstered' furniture you can cover with material or suitable coloured paper.



"SOLARBO" BALSA is sold by model shops throughout the world. It is available in 36" lengths in a wide variety of accurately machined sizes from 1/16" x 1/16" to 3" x 4" and in 48" lengths in a range of popular sizes.

Also available are shaped sections such as wing leading and trailing edges, fillet and dowel.

ALWAYS ASK FOR SOLARBO BALSA BY NAME AND BE CERTAIN OF BUYING THE BEST.

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